

## **REMARKS**

### **Procedural Status**

A Notice of Abandonment issued on October 1, 2008, indicating that the patent application had been deemed abandoned in view of "Applicant's failure to timely file a proper reply to the Office letter mailed on 27 February 2008."

Applicant has filed a Request for Withdrawal of the Notice of Abandonment herewith, explaining that the February 27, 2008 Office Action was never received by Applicant. In the event that Applicant's request is denied, Applicant has submitted herewith an alternative Petition for Revival of the application.

Upon grant of either of the accompanying request or petition, Applicant requests approval and entry of the accompanying request for continued examination (RCE) and this response, including the above amendments. The Commissioner is authorized to charge Applicant's Deposit Account No. 50-0548 to cover any missing fees (including the petition fee in the event that the request for withdrawal of abandonment is denied).

### **Claim Status**

Claims 1-14 and 27-33 are pending.

Amendments to claim 1 are supported in the original disclosure at, for example, page 11, lines 10-12. Claim 1 and many of the dependent claims have also been amended to make the claims more concise. New dependent claim 27 is supported in the original disclosure at, for example, page 5, line 9 to page 6, line 20. New independent claim 28 is based on claim 1, and finds further support in the original disclosure at, for example, page 9, lines 2-4. New independent claim 31 is based on claim 1, and is further supported in

the original disclosure at, for example, page 2, lines 21-22. New claims 29 and 32 are based on original claim 6, and new claims 30 and 33 are based on original claim 8.

The specification has been amended to correct the priority claim.

Approval and entry of the above amendments and new claims are respectfully requested.

### **Claim Rejections -- 35 U.S.C. § 102**

Claims 1, 2, 7, 12, and 13 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 1,794,194 to Meyercord et al. Applicant respectfully traverses this rejection.

Meyercord discloses a method of embossing plywood in which “heavily embossed areas **must** be highly compressed while flat or slightly rounded areas **must** be of a thickness more nearly approaching that of the original panel.” (Page 2, lines 22-50) (emphasis added). Meyercord elaborates that these heavily embossed areas are compressed to reduce their thickness preferably by more than half, “whereas the flat areas 2 should be compressed only slightly, in comparison.” (Page 1, lines 61-66)

Amended claim 1 recites a method in which a plywood door is deformed to form a door skin having a substantially uniform thickness and density. Meyercord expressly teaches away from a molded plywood door skin having a substantially uniform thickness and density. According to Meyercord, if the thickness of the non-embossed regions of its plywood must be greater than the thickness of the embossed regions, or else the grain of the core will show through the veneer. (Page 1, lines 31-35) As the Federal Circuit stated in *Kloster Speedsteel AB v. Crucible Inc.*, 230 USPQ 81, 86 (Fed. Cir. 1986), *cert. denied*,

479 U.S. 1034 (1987), where alleged prior art discourages from attempting a modification suggested by the applicant, such teachings are "strongly probative of nonobviousness". See also *Gillette Co. v. S.C. Johnson & Son, Inc.*, 16 USPQ2d 1923 (Fed. Cir. 1990).

Additionally, Applicant respectfully submits that the claims are directed to a method of forming a molded plywood door skin. Meyercord does not teach a door skin, as recited in claim 1. Absence of even a single element from an alleged reference negates anticipation.

For these reasons, Applicant respectfully requests reconsideration and withdrawal of the Section 102(b) rejection.

**Claim Rejection -- 35 U.S.C. §103(a)**

Claims 1-14, 25, and 26 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,312,540 to Moyes. Applicant respectfully traverses this rejection.

Moyes relates to the art of pressing composite blanks made of re-constituted wood fiber broken down into small chips and particles. Moyes states at column 5, lines 17-19 that its blank is a "non-solid wood fiber mat or bat." The pressing of the composite blank of Moyes in particular is discussed in the Background of the Invention, reproduced in part below:

Attempts to reform, or "post-form", a flat pressed wood composite blank into a molded blank having contoured portions have had varying results. For example, methods for reforming a wood composite blank are disclosed by Moyes in U.S. Patent Nos. 6,312,540 and 6,079,183, the disclosures of which are incorporated herein by reference and the assignee of which is the assignee hereof. Wood composite blanks are comprised of reconstituted wood fibers that have been broken down into small wood chips and/or wood fiber particles. These particles are bonded together with a synthetic resin to form the composite blank.

See specification, page 4, lines 13-20.

During such post-forming operations, the resin and fiber particles of the composite board are softened using heat and moisture. The fiber particles and resin become flowable and may be repositioned, making it possible to reshape the board into a desired contoured configuration, such as that of a molded panel.

While post-forming methods using MDF or other composites blanks disclosed by Moyes provide some advantages, the resulting surface quality of the finished door skin does not closely resemble natural solid wood: Moyes attempts to conceal the surface of its composite door skin by laminating melamine impregnated crepe paper or phenolic resin crepe paper over the exterior surface of the resulting door skin. See Col. 4, lines 65-67 of Moyes. The application of paper overlay may be time consuming and substantially increase manufacturing costs. Further, the resulting product may not be commercially acceptable unless great care is taken to ensure that the overlay is properly applied to the board surface. See specification, page 5, lines 18-21.

Plywood materials of the type claimed above have exteriorly disposed layer(s) or pl(y/ies) that are solid wood. The solid wood ply imparts qualities and an appearance of a solid piece of wood, and therefore provides an aesthetic advantage over composite blank molded articles such as disclosed by Moyes. However, the solid structure of wood plies has made plywood a commercially unacceptable candidate for compression molding where contoured designs are desirable:

The wood fibers in the solid wood plies have not been disrupted or reduced in size, such as with wood fiber particles in wood composite boards. In addition, the wood fibers in the solid plies of plywood are bonded together with a natural wood binder, lignin. Lignin bonds natural wood fibers together to form the wood grain. However, ***lignin does not display the same reforming capabilities compared to the synthetic resin***

***used to bond the wood particles together in wood composite boards. Lignin may not be softened and repositioned in the same manner as synthetic resin. As such, moldability of plywood is substantially decreased.***

See specification, page 6, lines 3-10 (emphasis added).

Because of the relatively non-disrupted and unreduced size of wood fibers in solid wood plies, and the nonformable bonding characteristics of plywood lignin which has not been “disrupted during initial wood fiber particle size reduction,” attempts to reform plywood boards generally have failed.

Such attempts have resulted in plywood boards having cracked and/or marred surfaces, particularly in contoured portions of the surface that are perpendicular to the direction of the wood grain. In comparison, wood composite boards, though not perfectly isotropic, may be more easily molded due to the relatively small size of its wood particles as well as the properties of the synthetic resin used to bond the particles together. Lignin present in the wood particles used in wood composite boards is disrupted during initial wood fiber particle size reduction. Therefore, it does not materially affect conventional reforming processes of such wood composite boards.

See specification, page 6, lines 13-20.

Given the fundamental differences between composite materials and plywood, a person of ordinary skill in the art would not have had a reasonable expectation that the composite-material treatment process of Moyes could be applied successfully to a plywood board. To the contrary, as explained in the specification, those of ordinary skill in the art would have understood that a plywood board’s larger wood fibers and presence of lignin which has not been “disrupted during initial wood fiber particle size reduction” makes plywood less flowable than composite materials. Such an artisan would not have reasonably expected the process of Moyes, which is based on the flow of resin and wood fibers and the disruption of lignin by fiber reduction, to be suitable for plywood shaping.

At page 3 of the final Office Action, the Examiner seemingly attempts to trivialize the differences in the claimed invention and Moyes by divorcing the “claimed method steps” from the plywood versus composite wood distinction:

Applicant appears to arguing [*sic*] that the use of a plywood and not a composite wood provide [*sic*] advantages. However, in claims 3, 6, 8-10 of the previous office action [*sic*] it is clearly stated that the claimed method steps are what has not been disclosed as providing an advantage or solving a stated problem.

MPEP 2116 states that “materials on which a process is carried out must be accorded weight in determining the patentability of a process. *Ex parte Leonard*, 187 USPQ 122.” As explained above, given the differences in lignin characteristics and fiber size between plywood and composite materials, a person of ordinary skill in the art would not have reasonably expected the process of Moyes -- which relies on the flow of small wood particles in a resin matrix -- to be suitable for use with plywood starting materials.

Claims 2-14, 25 and 26 depend from claim 1, and include all of the distinguishing features of claim 1. Accordingly, Applicant respectfully requests that the obviousness rejection be withdrawn and claims 1-14, 25, and 26 be allowed.

### **New Claims**

New claim 27 depends from claim 1, and specifies that the plywood is free of a non-solid mat of wood material. Applicant respectfully submits that Moyes teaches away from new claim 27 by promoting the use of non-solid composite mats in its process.

New independent claim 28 sets forth a method similar to claim 1, but specifies that the plywood comprises a plurality of wood plies bonded together. New independent claim 31 recites that plywood board comprises a solid wood ply bonded to a lumber core.


Moyes does not disclose either of these plywood materials or reasonably suggest that its method is applicable to these plywood materials.

### **Conclusion**

Applicant respectfully requests withdrawal of all rejections and allowance of the pending claims in light of the remarks and amendments herein.

A Request for Continued Examination (RCE) and the requisite RCE fee are enclosed. It is believed that no other fees are due with this submission. Should that determination be incorrect, then please debit Account No. 50-0548 and notify the undersigned.

Respectfully submitted,



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November 7, 2008

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